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Employment Protection and Distribution of Labour Market Opportunities

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Introduction

The labour market as well as other markets is subject to various forms of regulation. Market outcomes depend to some degree on the nature of the regulation. This is also true when it comes to the labour market. In this essay I focus on how different labour market regimes affect labour demand and the distribution of labour market opportunities. To be more precise I focus on how the strictness of employment protection policies might affect labour demand for workers with different characteristics.

How employment protection affects labour demand for different groups within the labour force will be analysed within the framework of the theory of fixed costs of labour. To a lesser extent insider-outsider theory will also be discussed. From this reasoning a few conclusions will be drawn as to what outcomes the theories predict regarding the distribution of labour market opportunities.

I will examine if the theoretical conclusions seem to be accurate in the case of Denmark and Sweden. The rational for this comparison is that Sweden has relatively strict employment protection policies while Denmark has a very liberal labour market regime in that respect. The choice to focus on Sweden and Denmark is also interesting because, except for the labour legislation, Sweden and Denmark have a lot in common. Both countries have a long tradition of rather ambitious welfare states. For example Denmark as well as Sweden has comprehensive public social insurances to ensure the individuals financial stability in case of illness or unemployment and so forth.

The analysis of workers with different characteristics will primarily focus on the situation for young people and immigrants compared to other parts of the work force. I find that there is good reason to believe that strict employment protection will hamper the demand for labour from these groups. When studying statistics for Denmark and Sweden I have found some support for this. It should however be stressed that there are many important factors that are not examined thoroughly in this modest essay.

The essay is structured in four parts. In the first part the question in focus for the essay is introduced. In this part there is also some background information about the countries in focus. In the second part the issue of employment protection is analysed theoretically, with

regard to how this affects the distribution of labour market opportunities. The theories considered are the theory of fixed costs of labour and Insider-Outsider theory. The third part of the essay presents statistics regarding the implications of the theories discussed. In the final part of the essay the results of the theoretical analysis and the statistical examination are discussed.

Background

What makes the field of labour economics essential is the huge significance of work in society. Obviously work is a critical production resource, so the functioning of the labour market is fundamental to the functioning of the economy as a whole. Most people earn their living through working and work is an important tax base.

Besides the fact that working is the primary source of income for most people, people also attach other values to their working life. Work is often a fundamental part of a person's identity and a source of pride. The work place is also a social arena where people often feel a sense of belonging. Being involuntarily without work for long stretches of time, on the other hand, means both low income and being excluded from the other values attached to working. The unemployed are excluded from a central part of mainstream society. This might lead to a weakened loyalty to society among unemployed people. This alienation might not just affect unemployed individuals negatively; it might also tear at the social fabric that holds society together. This is not a sociology paper, however when dealing with labour market issues one should keep in mind that there are dimensions of this that are not purely economical.

Theories that deal with labour market structures, such as employment protection, in general focus most attention on how labour market regimes affect employment levels. This is of course fundamental, but I think it is also important to investigate if and how different labour market regimes can lead to different distributions of labour market opportunities.

The opportunity for a person to find a decent job in many cases determines that person's opportunity of earning a decent income. From this statement one can draw the conclusion that the distribution of labour market opportunities has a profound effect on the distribution of income. Questions concerning income distribution are always on the political agenda in Nordic countries. The discussion of income distribution mostly focuses on taxes, social insurances, income transfer systems and so forth. The issue of labour market regimes is rarely mentioned as an issue for the distribution of income. Perhaps labour market policies ought to be a bigger part of the ever ongoing public discussion on income distribution.

Denmark and Sweden

It seems fair to say that there to some extent is a common political culture in the Nordic countries, and Denmark and Sweden are similar in many ways. Both countries are welfare

states with rather ambitious social protection. The notion of social security in the case of unemployment, illness and so forth is considered important, and the public insurances that serve these purposes are fairly generous. The commitment to income redistribution may however be a more defining characteristic that Denmark and Sweden have in common. Entitlement to the welfare services and systems is in general dependent on citizenship or permanent residence rather than on employment.[1]

In an international comparison the income distribution is quite equal in both Denmark and Sweden. The gini coefficient is arguably the most widely used measure of income inequality. In an OECD study on income distribution by Förster and Mira d'Ercole (2005) Denmark had the lowest gini coefficient and Sweden had the second lowest Gini coefficient. A lower value indicates a more equal income distribution.[2] It should come as no surprise then that the taxes are higher than in all other OECD-countries. According to OECD, the Swedish tax-to-GDP ratio for 2002 was highest with 50.2 percent and Denmark was close second with 48.9 percent.[3] Both countries are in terms of GDP per capita above the EU15 average, although less clearly above average when comparing purchasing power parities per capita. The GDP per capita of Denmark is somewhat higher than that of Sweden.[4]

This is clearly not an exhaustive account of what unifies Sweden and Denmark. It is however an underlying assumption in this essay that, apart from the sharp difference in employment protection policies, Denmark and Sweden are actually very much alike. Here I have merely presented some support for this assumption.

The Concept of a Labour Market Regime

In this part of the essay I discuss labour market regimes. The work presented in this essay relies heavily on the understanding that the labour market regime is considerably stricter in Sweden than in Denmark. However this is not really an issue that will be scrutinised in great detail here. It should rather be regarded as an informed assumption. Rather than trying to

[1] Petersson 1995, pp 22-36.

[2] "The Gini coefficient is defined as the area between the Lorenz curve (which plots cumulative shares of the population, from the poorest to the richer, against the cumulative share of income that they receive) and the 45º line, taken as a ratio of the whole triangle. The values of the Gini coefficient range between 0 in the case of "perfect equality" (each share of the population gets the same share of income) and 100 in the case of "perfect inequality" (all income goes to the share of the population with the highest income)." - Förster and Mira d'Ercole 2005 pp 9-10.

[3] Recent Trends and Reforms in OECD Countries - OECD Tax Policy Studies, No. 9 :Tables: Table A.

[4] OECD in Figures - 2005 edition, pp 12-13.

describe the various legislative policies, agreements and so forth I will present some sources that support my assumption.

To put things in perspective it might be a good starting point to describe what I have in mind with a “labour market regime”. Put simply, a labour market regime consists of the legislation, agreements and other institutions (besides the pure market forces) that regulate employment. This includes structures that regulate how wages are set and how hiring and firing are to be done. Rules and agreements also regulate a lot of other employment factors that also should be regarded as part of the labour market regime. These other factors are for example safety aspects of working conditions, right to vacation, working time and so forth.

In some countries the regulation of the labour market is almost purely handled by legislation. In other countries collective bargaining between unions and the employers is the dominant form of regulation. However a system based on collective bargaining agreements does not evolve in a legislative vacuum. The Swedish labour market for example is to a high degree regulated by collective agreements, but the legislation to a large degree facilitates this situation. So the legislation plays an important part in the system of regulation even though it in many cases leaves the details of employment conditions to be worked out by collective bargaining.

A critical part of the labour market regime is the structures for holding employers and employees accountable for complying with rules, regulations and agreements. Strong legislation with weak accountability cannot really be regarded as strict regulation. This might be a point worth emphasising; one can really end up drawing the wrong conclusions about the strictness of a labour market regime by only focusing on what is explicitly stated in the legislation. One form of accountability is obviously that employers and employees might be liable to lawsuits if they fail to comply with legislation and agreements. Public agencies might have some means to use at their own discretion when employers fail to meet various standards and so forth. The unions also have means of punishing or putting pressure on employers.

So accountability is important, however holding employers and employees accountable is dependent on that compliance is monitored somehow. Once again, strict legislation with strict accountability does not really result in strict regulation if the actors of the labour market are not monitored fairly closely. The monitoring function can be handled by various public

agencies and by unions. It is not necessarily one or the other; in some cases monitoring can be handled by some form of interaction between government branches and union representatives. This is for example the case in the monitoring of working environment in Sweden.

The point I am trying to make here is that a labour market regime is a complex system of institutions and actors where there may be many interdependencies between the various actors and institutions. The functions of the labour market regimes might be handled very differently in different countries. This makes the task of comparing labour market regimes very demanding. The aspect of labour market regimes that is in focus in this essay is employment protection. Fortunately the OECD has collected information on this issue.

Indicators of Strictness of Employment Protection

The Danish labour market regime is often described as less strictly regulated than in most other European countries. The main focus when making statements about the strictness of the labour market regime is the level of employment protection. The labour market in Sweden on the other hand is described as fairly strictly regulated.

The discussion on employment protection focuses on the dominant form of employment. This is employment that does not have a fixed endpoint; this will hereafter be referred to as regular employment. In both countries there are also various forms of temporary employment (fixed term employment). The defining quality of these is that the employee does not have the right to continued employment or severance pay at the end of the fixed term. Another defining quality of fixed term employment in the countries studied here is that fixed term employment cannot be extended more than up to a certain point. If the employment is extended beyond this point the employer obligations to the employee increases. I find that it is relatively safe to assume that most workers prefer to be regularly employed.[5] The existence of fixed term employment means that the concept of being "established" in the labour market is more complex than just a question of being employed or not.

In 1993 Wells and Grubbs put together a measure for comparing "strictness" of employment protection regulation.[6] OECD has since then continuously collected information and measured the strictness of employment protection regulation along the lines developed by Wells and Grubbs. The strictness measure for regular employment focuses on three main

[5] Holmlund and Storrie 2001, pp 22-24.
[6] Wells and Grubbs 1993.

areas. These are: difficulty of dismissal, procedural inconveniencies, and notification time and severance pay. Each country is graded according to certain principles in these categories. From the grading on these categories a measure of overall strictness is constructed. The values of the overall indicator support the understanding that the Swedish employment protection regulation is indeed substantially stricter than the Danish one. In most countries there are special regulations for collective dismissals, but the focus here is on individual dismissals.

In the part of the measure that focuses on procedural inconveniences factors regarded are administrative requirements that must be handled before notice time can start. In Employment Outlook 1999 this is described as follows:

> "Countries are scored according to the delay involved before notice can start (for example, because there has to be a sequence of previous warnings, or because an interview has to be scheduled with the employee), according to whether a written statement of the reasons for dismissal must be supplied to the worker in question, whether a third party (such as a works council or the competent labour authority) must be notified or consulted and whether dismissal cannot proceed without the approval of a third party."[7]

In this category the countries are ranked on a scale from 0 to 6 where a higher score means stricter regulation. Denmark is graded 0.5 and Sweden 3.0 in this category. The numbers themselves are obviously not very meaningful outside the context of being a measure for comparing labour market regimes. Of the 27 OECD countries that are included the ranking Denmark ranks as number 3 and Sweden as number 22, where a higher ranking means a stricter labour market regime. The least strict in this sense in the ranking are the labour market regimes of the United States and Canada. The Netherlands ranks as the strictest in this category.[8]

Moving on to the notice and severance pay category; not surprisingly this deals with for how long period the employer will have to pay wages starting from when the employee is notified of the dismissal. Severance pay means that the employee is paid for a certain amount of time after the employee has left the work place due to the dismissal. Notice period is a period from the notice until the dismissal takes effect. During the notice period the employee is still employed and can be expected to continue working until the dismissal takes effect. Severance

[7] Employment Outlook 1999, p 54.
[8] Employment Outlook 1999, pp 55-57.

pay provisions do not exist in the Swedish labour market regime. In Denmark there are severance pay provisions, but then only when very long standing employments are terminated. Notice time is used in both Denmark and Sweden. The differences are quite small, but the Danish system is ranked stricter than Sweden. The length of the notice time periods and severance pay periods depends on the length of the employment. A few examples of this are given in Employment Outlook. For a regular employment being terminated after 9 months the notice time period would be 1.8 months in Denmark and 1.0 month in Sweden. For 4 year employment the notice time period would be 3.0 months in both countries. In the case of a 20 year employment being terminated the Swedish notice time period would be 6 months. For an equally long employment in Denmark the notice time period would be 4.3 months and the employee would also be entitled to severance pay for 1.5 months. In this category Sweden ranks as number 14 and Denmark as number 18 in this category. The United States labour regulation is considered the least restrictive in this category too, and Portugal ranks as the strictest.[9]

The difficulty of dismissal category measures how strict the regulation is regarding what is considered fair dismissal. The indicator also takes into account how harsh the effects are for employers who are found to have unfairly dismissed employees. The OECD ranks Denmark as number 8 and Sweden as number 22 in this category. The United Kingdom is ranked as the least strict in this aspect, closely followed by the United States. Norway and Portugal are ranked as the strictest. [10]

In the summary indicator of overall strictness of employment protection Denmark is ranked 7 and Sweden is ranked 22. Once again Portugal is ranked the strictest and the United States the least strict. [11]

Wage Determination

There are no statutory minimum wages in Denmark or Sweden. Minimum wages and annual wage increases are instead determined by collective bargaining between unions and employer organisations.[12] Besides wages, the collective agreements regulate many other aspects of employment. This could for example be working time issues, pension rights and so forth. The

[9] Employment Outlook 1999, pp 55-57.
[10] Employment Outlook 1999, pp 55-57.
[11] Employment Outlook 1999, pp 55-57.
[12] European Industrial Relations Observatory On-line: Minimum Wages in Europe.

union membership rates are high, around 80 percent, in both countries.[13] In Sweden more than 90 percent of employments are covered by a collective bargaining agreement, in Denmark it is somewhat less at 83 percent.[14]

Unemployment Benefits

Unemployment benefits are generous in Denmark as well as Sweden, in size as well as duration. The size of the payments is determined by the person's income prior to unemployment. In Sweden the level is 80 percent of the income during the reference period, and in Denmark it is 90 percent.[15] These levels apply up to the maximum amounts of the compensation. In Sweden the maximum amount is about 350 Euro per week, and in Denmark the maximum amount is around 400 Euro per week.[16] In this context, it is worth noting that the average gross earnings for full time workers in Denmark are around 40 percent higher than in Sweden.[17] The unemployment insurances differ somewhat in the details, but in this context it is sufficient to note that they are fairly generous in both Denmark and Sweden.

Theoretical Analysis

In this part of the essay the theory of fixed costs of labour and Insider-Outsider theory are introduced. The focus is on analysing what implications the theories have for the distribution of labour market opportunities, when levels of employment protection vary.

The Theory of Fixed Costs of Labour

In this section the theory of fixed costs of labour is introduced. The idea is to use this framework to analyse the effects of employment protection on labour demand for groups of workers with different characteristics. One difference in characteristics considered is the accuracy with which the employers can predict the productivity of potential workers. The evaluation of potential workers might be more uncertain for workers with for example less work experience or country specific human capital. Another characteristic considered is differences in productivity. Employers might be biased in their evaluation of workers from certain groups. How this characteristic can be expected to affect hiring decisions depending on the level of employment protection will also be explored. The reasoning here is based on

[13] Nelander and Lönnros 2000, p 25.
[14] Ifo's Database for Institutional Comparisons in Europe (DICE) - Collective Bargaining Coverage, 2000/2001.
[15] Velfærdskommisionen: Analyserapport ─ Fremtidens velfærd – sådan gør andre lande 2005, pp 87-113.
[16] Kongshøj Madsen 2005.
[17] Eurostat Databank.

the theory as presented in Elliotts textbook "Labor Economics".[18] The concept of fixed costs of labour was originally introduced by Oi.[19]

The Fixed Costs of Labour Model

In basic labour economics hiring workers is often described as taking on a variable cost. The firm would then hire workers until the marginal revenue product of labour (MRP) equals the wage. The theory of fixed costs of labour is somewhat more realistic in the sense that it assumes that there, besides wages, are costs associated with the hiring in itself and with the introduction of new workers to the workplace. The employer has to recoup these costs within a reasonable time period. A vital assumption for the theory is however that the magnitude of the fixed costs associated with hiring a new worker are such that it is not possible to recoup them right away. Hence, the fixed costs of hiring turn the hiring decision into an investment decision. The employer would then hire workers until the present value of the MRP (PVMRP) equalled the present value of the marginal cost of another worker (PVMC). The PVMC is the present value of the wages and the fixed costs of hiring. Before continuing, I think it will be helpful to introduce an algebraic expression describing the hiring condition in a simple case with three time periods.

$$PVMRP - PVMC \geq 0$$

$$PVMRP = MRP_0 + \frac{MRP_1}{(1-r)} + \frac{MRP_2}{(1-r)^2}$$

$$PVMC = F_0 + W_0 + \frac{W_1}{(1-r)} + \frac{W_2}{(1-r)^2}$$

$$\sum_{i=0}^{2} \frac{MRP_i}{(1-r)^i} - \sum_{i=0}^{2} \frac{W_i}{(1-r)^i} - F_0 \geq 0$$

The first of these is simply the hiring condition; to hire a worker the revenue from an additional worker must at least cover the costs for that worker. The second expression defines the present value of the revenues from the marginal worker. The third expression defines the present value of the marginal costs of an additional worker. The last expression is the hiring condition where the present value formulas have been substituted into the expression. The

[18] Elliott 1991, pp 251-263.
[19] Oi 1962.

term denoted F_0 is the fixed costs of hiring, and the term W_i is the wage in the time period i. The term denoted r is the discount rate. It is assumed that there is a planning horizon consisting of three periods. It is assumed that the hiring costs occur in the first period.

Effects of Hiring Costs

Later on, firing costs will be included in the model, but let us first concentrate on the effects of hiring costs in this simple model. The hiring costs consist of administration costs for setting up the employment position; advertising it, handling the applications, interviewing applicants and so forth. Training costs could also be regarded as part of the fixed costs of hiring.

From this model we can draw at least one interesting conclusion regarding the effects of hiring costs. In the absence of fixed hiring costs a certain ratio of wage to MRP would always give the employer the same rate of return on the employment. That is, workers with different levels of productivity still give the same rate of return if all workers have the same wage to MRP ratio. However, under the assumption that there are fixed hiring costs the lower productivity workers will have to get a smaller part of their production value in wage in order to yield the same rate of return to the employer. Another way of looking at it is: to recoup the fixed hiring cost the minimum difference (in absolute terms) between PVMRP and the present value of the wage is the same for all workers regardless of their productivity. This amount will obviously be a larger part of the PVMRP for workers with low PVMRP. The point of this is that increasing fixed hiring costs provides downward pressure on the wages for all workers looking for employment, but especially so for workers with low productivity. According to the model higher hiring costs promote larger relative wage differentials between high productivity workers and low productivity workers, given that the absolute hiring costs are the same for all workers.

The employer does not know the productivity of the workers when hiring. The dynamic described above is based on employer predictions of worker productivity. The mechanism also applies to situations where employers *believe* that there is a difference in productivity between workers. If employers make biased estimates of the productivity of workers from some specific groups, then this bias will have a stronger impact on labour demand the higher the fixed costs of hiring are.

How is the reasoning and the conclusion in the paragraph above linked to the question of labour market regimes? Strict employment protection makes bad hiring decisions very expensive. It is highly likely that when the costs for bad hiring decisions increase, the employers will respond by taking more care when hiring. This would mean spending more resources on searching, selecting and interviewing candidates and so forth.[20] This translates into higher fixed costs of hiring. By this reasoning stricter employment protection would, through higher fixed costs of hiring, lead to downward pressure on the demand for low productivity workers.

The fixed hiring costs include the administration costs surrounding the setting up of new employment positions. A more regulated labour market might demand more administrative procedures in the process of hiring. For example, in a unionised labour market the employer might be obligated to negotiate with union representatives before making hiring decisions. This, and other regulations that increase the administrative procedures when hiring, obviously also lead to a higher level of fixed hiring costs.

Introducing Firing Costs in the Model

The very idea of employment protection is that employers should not be able to fire employees just on impulse. Employment protection regulation in general includes that the employer is obligated to give advance notice when firing an employee and / or pay severance pay. There might also be more or less burdensome administrative procedures that must be handled when firing workers. So there are costs associated with firing workers. I believe that in general it is correct to consider firing costs to be increasing with the strictness of employment protection.

To analyse the effects of firing costs on labour demand, firing costs need to be included in the model. By using the existing model above an expected value function can be formulated that incorporates the risk of encountering firing costs. In this model a hiring condition can be expressed along the same lines as in the model above. The extended model will be slightly more complicated. This is because the firing costs will only be encountered if the employer wants to fire the worker. Therefore there is a need to introduce an element of probability in to the expected value model.

[20] This effect was observed soon after the Swedish employment protection legislation was introduced in 1974 according to Edin and Holmlund 1993, p 1050.

I will assume that employers know the present value of the marginal cost of a worker when hiring. This is of course a simplification, but it seems reasonable that employers would have a pretty good idea of how the wage cost will develop from the wage negotiated when the individual is hired. From experience employers should also have a good idea of how high the hiring costs are. I will, however, assume that there is considerable uncertainty about how the PVMRP will actually turn out. When hiring, the employer makes a prediction of the PVMRP. The employer knows that the actual value can fall on either side of the predicted value. The predictions of PVMRP are symmetrically distributed and are on average correct.

In order to arrive at the expected value model we need to have an idea of when employers would consider the hiring decision to be a mistake, and therefore would like to fire the employee to cut their losses. The condition I have chosen is the following: when the result of the employment is negative at the end of the planning horizon the employer will fire the worker and encounter the firing costs. We can now express the result in a two part function. R denotes the present value result, i.e. the pay-off to the employer from the hiring, and PVT is the present value of the firing costs. For simplicity it is assumed that the firing cost is fixed.

$$PVMRP - PVMC \geq 0 \Rightarrow R = PVMRP - PVMC$$

$$PVMRP - PVMC \leq 0 \Rightarrow R = PVMRP - PVMC - PVT$$

The first expression is the pay-off of a successful hiring. The second is the pay-off at the end of the planning horizon if the employer has to fire the employee. The expected value function is simply the sum of the expected values of each of the variables (see below). The expected value of PVMRP is the predicted value. The hat on PVMRP denotes that it is a predicted value. The PVMC is known to the employer when hiring. The bar over PVMC denotes that this is not a random variable. The expected value of PVT is the probability that this fixed cost is encountered multiplied by the value of PVT. The term R represents the result of the employment decision.

$$E[PVMRP] = \widehat{PVMRP}$$
$$E[PVMC] = \overline{PVMC}$$
$$E[PVT] = P\left[PVMRP - \overline{PVMC} \leq 0\right] * \overline{PVT}$$
$$E[R] = \widehat{PVMRP} - \overline{PVMC} - P\left[PVMRP - \overline{PVMC} \leq 0\right] * \overline{PVT}$$

This expression for the expected value of hiring shows that in order to hire, employers demand compensation for the risk of having to take on firing costs. The compensation demanded takes the shape of an expected surplus of PVMRP to PVMC. The gap has to be at least the size of the expected value of the firing cost. The size of the expected firing cost is determined by the probability of encountering the cost and the size of the firing cost.

The probability of encountering the firing cost depends on the distribution of predictions of PVMRP and on the size of the gap between the predicted PVMRP and the PVMC. Let us assume that the predictions are symmetrically distributed around the true value. The interesting thing with this model is that it provides a perspective on how demand for labour can be expected to vary for groups of workers, with the size of their expected firing costs. In the model it is primarily a question of how much lower than the predicted PVMRP the PVMC must be, depending on different levels of firing costs and different characteristics of the workers. The interesting thing about this is that different gaps between PVMRP and PVMC translate into differences in wages. If wages are not flexible enough then the result will be differences in the demand for different groups of workers.

Interpreting the Model

Differences in Uncertainty

In the absence of firing costs the hiring condition would simply be PVMRP > PVMC. The same would apply if there was no uncertainty in the prediction of the production value. Since there is both uncertainty in the predicted production value and a positive firing cost in our model the PVMC must be lower than the predicted PVMRP.

It is likely that there are different levels of uncertainty when employers predict PVMRP of workers. Let us consider a few examples. Young people often have little or no work experience, so they have less proof of their productivity than established workers. Immigrants

may have foreign educations, and might have little or no country-specific work experience. People who are looking for jobs in a new sector have no documented accomplishments in that sector, and there might therefore be more uncertainty in the prediction of their productivity in the new sector than for other workers.

With more uncertainty there is a higher probability for values that are substantially lower or higher than the predicted value. Consider two workers with the same predicted PVMRP. One of them belongs to a category with more uncertainty. If these were given the same wage there would be a higher probability that the employer would encounter the firing cost for the worker with more uncertainty. In order for these workers to give the same expected result for the employer the wage will have to be lower for the worker with more uncertainty.

The compensating wage differential effect of different levels of uncertainty obviously increases with the size of the firing costs. If the wage is the same, the demand for "uncertain" labour decreases relative to labour with less uncertainty when the firing costs increase.

The model does not include an assumption of risk aversion. It suffices to note that if such an assumption was added, the wage effects of differences in uncertainty in the presence of firing costs would increase.

Differences in Productivity

Now let us consider the case of differing productivity. Consider two workers with the same distribution of predicted PVMRP, but where their predicted PVMRP are at different levels. The question is: how does the level of firing costs affect the wage differential between these workers?

$$\hat{PVMRP} - \overline{PVMC} \geq P\left[PVMRP - \overline{PVMC} \leq 0\right] * \overline{PVT}$$

The firing cost puts relatively more downward pressure on the wage for workers with low expected productivity. The equation above describes the hiring condition. Let us assume that the two sides of the equation are equal for a worker with high productivity, so that the expected result of hiring the high productivity worker is zero. For a lower productivity worker the same ratio of expected PVMRP to PVMC, as for the high productivity worker, will bring

an expected negative result. As long as the ratio of the expected PVMRP to PVMC is the same for the two workers, the probability for the employer of encountering the firing costs is the same for both workers. This means that this part of the equation would be same for both workers: $P\left[PVMRP - \overline{PVMC} \leq 0\right] * \overline{PVT}$. For the worker with lower expected PVMRP the absolute value of $P\hat{V}MRP - \overline{PVMC}$ would be lower than for the high productivity worker if the ratio of PVMRP to PVMC was the same as for the high productivity worker.

By this reasoning, higher firing costs lead to relatively more downward pressure on the wages for workers with low productivity. Under constrained wages this downward pressure on wages should be interpreted as a lower quantity demanded for low productivity labour.

Bias in Productivity Predictions

Since employers do not have full information on applicants when hiring, there is room for bias in estimating the productivity of applicants. Employers might, for whatever reasons, have certain opinions of different groups in the labour force. These opinions can be founded or unfounded. When estimating the productivity of an applicant from a group, employers might let their general opinion of the group influence the prediction of the individual applicant's productivity. This is statistical discrimination.[21]

Let us consider the case where statistical discrimination takes the shape of a negative bias in the predicted PVMRP for applicants from some group. The negative bias means that the average prediction of the PVMRP for the workers of this group will be lower than the actual average PVMRP. The effects of this form of bias are the same as for other differences in predicted PVMRP. We saw above that firing costs depress wages more for lower productivity workers, and if the firing cost increases this puts relatively more downward pressure on the wages for low productivity workers. This means that, according to the model presented here, the effects on wages(or quantities demanded) of negative biases also increase with firing costs.

Taste Discrimination

One should make a distinction between statistical discrimination and taste discrimination. The latter is where employers consciously treat some groups of workers worse than others. The

[21] Phelps 1972.

motivation for taste discrimination is, contrary to statistical discrimination, not that the employer believes that this economically benefits the firm. The motivation is rather that the employer has taste for discrimination, in the sense that he prefers not to hire some group of workers because of for example racist views. Gary Becker developed the concept of taste discrimination.[22] Goldberg has interpreted this concept formally in the shape of an employer utility function. In the utility function there are two groups of workers: white and black. Black workers are assumed to be discriminated against. The profit function is as follows where Q is the production value, L the quantity of labour used.

$$\pi = Q(L_w + L_b) - W_w L_w - W_b L_b$$

The point with Goldberg's conceptualisation is that the employer maximises utility rather than profit. The utility function is the same expression but where the disutility from black labour is subtracted. The term d is a discrimination coefficient larger than zero. [23]

$$U = Q(L_w + L_b) - W_w L_w - W_b L_b - dW_b L_b$$

Now this discrimination concept is expressed in a form that is alien to the fixed costs of labour model above. In Goldberg's expression the employer utility is expressed as a result of the composition of the workers hired, and in the model above the analysis is based on interpreting hiring conditions under different circumstances. How can the notion of disutility from hiring workers of certain discriminated groups be introduced in to the fixed costs of labour analysis? The fundamental idea of Goldberg's interpretation of taste discrimination is that the discriminating employer acts as if the wage for black workers was higher than it actually is. Let us introduce this concept to the hiring condition used above.

$$\hat{PVMRP} > \overline{F_0} + \overline{PVW_b}(1+d) + P\left[PVMRP < \overline{F_0} + \overline{PVW_b}(1+d)\right]\overline{PVT}$$

$$\hat{PVMRP} > \overline{F_0} + \overline{PVW_w} + P\left[PVMRP < \overline{F_0} + \overline{PVW_w}\right]\overline{PVT}$$

The first expression here describes the discriminating employers hiring condition for workers from the discriminated group. The second expression is the hiring condition for the non-

[22] Borjas 2005, pp 358-356.
[23] Goldberg 1982.

discriminated applicants. PVW denotes the present value of wages, the subscript indicates if the worker is black or white. When taste discrimination works along these lines the employer will always be indifferent between hiring white or black workers, as long as the predicted PVMRP are equal and the following condition is satisfied: $W_w = W_b(1+d)$, i.e. the black wage is sufficiently lower relative to the white wage to compensate for the employer's discriminatory taste. This means that the size of hiring or firing costs has no influence on the effects of taste discrimination, as long as these costs do not differ between white and black workers.

Segmentation Effects

The main aim with the model presented here is to provide a way of analysing how employment protection might influence labour demand for workers with different characteristics. The model is primarily focused on analysing how wages need to vary between different workers in order to pass the hiring condition. Wage setting can however be constrained by collective agreements and other factors. The constrained wages and the need for wage differences accentuated by employment protection policies can make some workers unhirable (in some capacity or sector, not necessarily "unhirable" in the entire labour market). An effect of this can be high unemployment among the groups that are affected by the demand lowering mechanisms described above; workers with higher than average uncertainty and so forth. The effect could also be that some of the workers concerned are segmented to less desirable jobs.

According to the model, hiring and firing costs merely accentuate or amplify some segmentation mechanisms. Differences in labour demand with regard to productivity are accentuated, and differences in labour demand with regard to biased productivity predictions are also accentuated. The effects on labour demand of differences in uncertainty in productivity predictions is different in the sense that this mechanism is not merely accentuated by firing costs, it would not exist in the absence of firing costs or a risk aversion assumption.

Immigrants entering a labour market can be expected to be negatively influenced by the demand effects of uncertainty in employer productivity predictions. From my perspective I also find it very likely that immigrants often are victims of a negative bias in productivity

predictions. The demand for immigrant labour would then on these accounts be negatively influenced by strict employment protection.

Young people with little or no relevant work experience would probably be negatively influenced by the demand effects of uncertainty in employer productivity predictions. It is also reasonable to believe that young people entering the labour market in many cases will have a relatively low productivity.

From this reasoning we should expect unemployment to be relatively higher for young people and immigrants in countries where there is strict employment protection. We should also expect other dimensions of segmentation to be more visible in labour markets with strict employment protection. In labour markets where there are temporary employments, the failure to find regular employment does not necessarily lead to unemployment.

A temporary employment is a smaller commitment for an employer. Employers are not obliged to pay severance pay or motivate why a temporary employment is not renewed when the pre-specified time period is over. Hiring and firing costs are therefore lower for temporary employments. Because workers in general prefer regular employment, the distribution of temporary employment is a dimension of labour market segmentation.[24] Since hiring and firing costs are lower for temporary employments, the labour demand for temporary employments should be less sensitive to differences in uncertainty, differences in productivity and bias in productivity predictions. The workers who have difficulties finding regular employment should also be overrepresented in the supply for temporary employments. For these reasons we should expect young workers and immigrant workers to be overrepresented in temporary employment. This segmented structure should be more accentuated where there are high hiring and firing costs for regular employment; that is where employment protection is strict for regular employment.

Insider-Outsider Theory

The basic structure of insider-outsider theory is that some participants that have gained insider status have access to better job opportunities than the outsiders. The insiders typically have some market power due to e.g. labour turnover costs (LTC). The market power can be used to push wages above market clearing levels and thereby reduce the number of job opportunities

[24] Holmlund and Storrie 2002, pp 22-24.

in the sector. The insider-outsider theory has largely been developed by Lindbeck and Snower. In this part of the essay I will describe what I find to be the main points in insider-outsider theory as developed by Lindbeck and Snower. The theory is relevant to the discussion of the effects of employment protection legislation. The reason for this is that in the theory the market power of insiders stems from labour turnover costs, and employment protection regulation can be expected to substantially increase labour turnover costs. [25]

The actual meaning of being an insider or an outsider can differ. The core idea is that there is a dimension of segmentation in the labour market that makes insider status favourable to outsider status. One interpretation of insiders vs. outsiders could be for example tenured employees vs. those unemployed or employed on fixed term contracts. Lindbeck and Snower sometimes refer to primary sector employees vs. secondary sector employees. I find that this dichotomy is basically about those with jobs with desirable characteristics (high wage and development opportunities) and those who have to settle for low paying dead end jobs. [26]

According to the Lindbeck and Snower view it is important to recognise that the employers have two different partners in wage negotiations; insiders and outsiders. In the absence of labour turnover costs these two groups are perfect substitutes. The wages are then driven down to the reservation wage for the marginal worker. On the other hand, when labour turnover costs are prohibitively high the firm and its insiders have bilateral monopoly power. Between these extremes Lindbeck and Snower mean that insider market power can be regarded as increasing with labour turnover costs. Four assumptions are central in insider-outsider models according to Lindbeck and Snower. In their words these are:

> "1) Firms face labor turnover costs that they cannot entirely pass on to their employees. 2) Insiders have some market power. 3) If entrants remain with a firm long enough, they become associated with the same labor turnover costs as the insiders, and have an opportunity to renegotiate their wage. 4) Employment decisions are made unilaterally by the firms" (footnote comments excluded from the quote).

Labour turnover costs are important in the model. Labour turnover costs are the costs firms incur when replacing insiders by outsiders. Lindbeck and Snower divide these into two categories; "production-related" and "rent-related" labour turnover costs. The production-related costs are factors like search costs, hiring costs and training costs. Rent-related costs

[25] Lindbeck and Snower 2001.
[26] Lindbeck and Snower 2001, pp 176-177.

are the result of rent seeking activities by insiders according to Lindbeck and Snower. These include severance pay, seniority rules, provisions for advance notice before dismissal, and other forms of legal protection. In the absence of legal protection and production related labour turnover costs insiders can still act strategically to create labour turnover costs and thereby achieve market power. Insiders can for example create a productivity difference by cooperating with each other in the production process but refusing to cooperate with underbidding entrants. Lindbeck and Snower summarise the main point of insider-outsider theory like this:

> "Due to labor turnover costs, outsiders face labor market discrimination in the sense that they do not receive equal reward for equal productivity. As a result outsiders may be involuntarily unemployed or confined to dead-end jobs – that is, they may be unable to work their way into insiders' jobs even though they are willing to work for less than insider wages, normalized for productivity differences. The outsiders are not party to the negotiations that set the conditions of employment for insiders."

It should be obvious by now that employment protection policies are not the only factor of labour turnover costs. Employment protection does however, increase the labour turnover costs. Hence, from the reasoning of insider-outsider theory, insider market power increases with employment protection. In the absence of employment protection provisions there are still what Lindbeck and Snower refer to as production-related labour turnover costs. These can be expected to vary significantly between different sectors of the labour market. It is reasonable to expect search costs and training costs for example to differ substantially. In the high LTC sectors wages should be pushed above competitive levels and employment should therefore be reduced, according to the theory. The low LTC sectors should have lower wages (than the high LTC sectors) due to less market power. The reduction of employment opportunities in the high LTC sectors due to insider market power would also increase the supply of labour in the low LTC sectors. This would further depress wages in the low LTC-sector and contribute to the wage differential between the sectors. Implicit in this reasoning is obviously that the wages are normalised for productivity differences.

Employment protection provisions bring labour turnover costs to every sector of the labour market. Far-reaching employment protection can make production-related LTC an insignificant factor in labour turnover costs. Because of this, segmentation of wages due to differing LTC should not exist where there is very far reaching employment protection.

The insider-outsider theory is primarily a theory that strives to explain the occurrence and persistence of unemployment. To my knowledge, Lindbeck and Snower have not focused very much attention on the distributional consequences of the theory. However one does not have to dig very deep to draw some distributional conclusions from the work of Lindbeck and Snower.

In their work Lindbeck and Snower approach the insider-outsider dynamic from a few different directions. One of them deals with employment effects of recessions. Lindbeck and Snower mean that LTC work both to deter firing and hiring. When business cycles are short and shallow LTC promote keeping employees in recessions with the expectation that demand will soon rise again. When recessions are deep and long LTC will not discourage lay offs, but still deter hiring after the recessions. Because of this, the employment effects of recessions tend to persist for far longer than the actual recessions. Those laid off in a deep recession might loose their insider position and as a result will not have any say in wage negotiations. The remaining insiders can use their market power to increase wages when demand rises and thereby hamper increases in employment. Lindbeck and Snower mean that business cycles were short and shallow in the 50s and 60s. In contrast, the recessions of the 70s and early 90s were long and deep.[27]

High LTC tends to reduce the circulation from regular employment to the unemployment pool and vice versa. To put it simply: the protected position of insiders makes it hard for outsiders to establish themselves in the labour market. This is especially true when there is already a substantial unemployment pool of workers to compete with for a limited number of opportunities. Outsiders do not necessarily have to be unemployed; they might also be segmented to jobs beneath their capacity or have to make do with jobs on fixed term contracts. The outsiders might also be disgruntled and leave the work force or choose to work in the underground sector.

Who can be expected to be outsiders? The way I see it there are primarily two groups of workers. First there are those who have lost their insider status due to lay-offs and structural changes in the labour market. Secondly there are entrants to the labour market. The entrants will primarily be young people who have finished their education and immigrants who have recently arrived in the country. The burden of high, persistent unemployment should be

[27] Lindbeck and Snower 2001, pp 171-172.

expected to primarily be suffered by the workers in these groups. Low LTC promote more circulation in and out of regular employment. As a result this should lead to more frequent but shorter spells of unemployment for the entire labour force. High LTC should, due to the lower circulation, make unemployment spells less frequent but longer lasting.

A political economy perspective on the insider-outsider dichotomy might be in order. How unemployment is distributed in the labour force might affect how serious the unemployment problem is perceived to be. In the paragraph above the conclusion is drawn that with high LTC unemployment should be more prevalent in certain groups. If these groups are somehow separate from the other parts of the labour force, then it is certainly easier for those in regular employment to distance themselves from the unemployment problem. It is fundamental to the insider-outsider theory that the outsiders do not have any say in the wage setting for insiders. Wages should therefore be negotiated with little regard for those outside, according to Snower and Lindbeck. If the unemployed are separate from the insiders by other social divides as well, then the unemployment should have even less effect on wage setting. This reasoning is particularly relevant in the discussion regarding immigrant unemployment. The issue could be of some importance for youth unemployment as well.

Empirical Analysis

In this chapter we look at labour market data for Denmark and Sweden. The data shown is focused on investigating if the theoretical predictions made earlier seem to be correct for the case of Denmark and Sweden. The rational for this comparison is as described earlier that Sweden has rather strict employment protection, whereas Denmark on the other hand has a rather liberal employment protection policy. The data covers the distribution of unemployment, the distribution of temporary employment and the distribution of self-employment.

Where it has been possible the data has been obtained from the Eurostat online databank. It consists of harmonised statistics from the national labour force surveys. Where it has not been possible to use data from this source, figures from other EU publications are used and also from publications by OECD. The national statistics agencies, Statistics Sweden and Statistics Denmark, also publish a wide range of labour market data. Data from national sources is not necessarily suitable for making comparisons between countries. There could be discrepancies in various definitions, and so forth. International organisations like, in this case, Eurostat and

OECD have the ambition to present data suitable for international comparisons. For this reason I have chosen to use data from Eurostat and OECD, ant not to use data from the national statistics agencies. In general the data are the most recent yearly data that has been possible to obtain. Mostly the data describes the situation for 2004, but in some cases older data are used as well.

For the purposes of this essay it is not how the rates themselves differ for different groups between the two labour markets that are of primary interest. What is primarily examined is how the situation for the different groups relates to the general situation in that specific labour market compared to the relative situation for the same groups at the other labour market. To be able to make these comparisons there is a need for a measure of the relative situation for different groups. For this purpose a simple relation index is used. This is displayed along with the unemployment rates and so forth. The base number in the index is 100. The base group for the index always represent the general situation in each country. The base groups, however, differ somewhat between the different measures used. This is explained along with each measure. All comparisons focused on immigrants are based on individuals of working age, i.e. 15-64 years old, with one exception. The comparison of the rate of self-employment includes all above the age of 15 years.

The comparison of different groups in the labour force is focused on different age groups and on the situation for foreign citizens compared to others in the two countries.

General Employment Statistics

First let us have a brief look at some general labour market statistics. It is general in the sense that we look at the entire labour force and the total population of working age, i.e. 15-64 years old. First, I will introduce some definitions. These definitions are used by Eurostat.

All individuals aged 15 and over whom during the reference week did any work for pay or for profit are defined as employed. Those who, during the reference week, had a job but were temporarily absent are also considered employed. The employment rate is the fraction of the total population of working age (15-64 years old) that was employed, during the specific time period.

In Eurostats data persons aged 15-74 are defined as unemployed if they during the reference week were not employed, were available for work and had either actively been seeking work in the past four weeks or had found a job about to start within the next three months. The unemployment rate is the fraction of the labour force of working age (15-64 years old) that was unemployed, during the specific time period.

The labour force (often referred to as "the economically active population" by Eurostat) consists of the employed and the unemployed. The labour force participation rate is the fraction of the total population of working age that was in the labour force, during the specific time period.

Table 1.

	Labour force participation rate %	Unemployment rate %	Employment-population rate %
Denmark	79.5	5.6	75.7
Sweden	77.3	6.6	72.1

Source: Eurostat, participation rate 2003, the others are average values for 2004 calculated from quarterly figures.

From this table we can see that Denmark has slightly higher participation and employment rates and slightly lower unemployment rate. Hence, the differences in general labour statistics are rather small.

Age Distribution of Unemployment

In table 2 we look at unemployment rates for different age groups in the labour force.

Table 2.

	Denmark		Sweden	
Age	Unemployment rate %	Relation index	Unemployment rate %	Relation index
15-64	5.6	100	6.6	100
15-19	7.6	135	23.2	352
20-24	8.8	156	14.3	217
25-29	7.3	130	8.7	132
30-34	5.7	101	5.9	89
35-39	4.5	79	5.1	77
40-44	4.4	79	5.1	77
45-49	4.4	78	4.1	62
50-54	4.5	81	3.8	58
55-59	6.4	114	4.3	64
60-64	3.9*	70*	6.0	91

Source: Eurostat, 2004 average values calculated from quarterly data, the indexes are calculated with more decimals than those shown in the unemployment rates in the table.
*This figure is a mean calculated from Q1, Q3 and Q4 2004, the quarterly figures for this particular age group of workers is presented by Eurostat with the comment that it should be regarded as unreliable.

Table 2 shows that the unemployment is more evenly distributed among the different age groups in Denmark than in Sweden. In both Denmark and Sweden there is higher than average unemployment among the youngest age groups on the labour market. As predicted by the theories in this essay the relation index of unemployment is actually a lot higher in Sweden for the youngest age groups. There is a tendency that unemployment decreases with age up to a higher age in Sweden than in Denmark. Both these observations of the differences between Denmark and Sweden are in accordance with the theories discussed.

In both countries the unemployment rises in the 55-59 group, but more so in Denmark. In Denmark the unemployment for this group is actually higher than average. This might be because in Denmark there are fewer restrictions on firing individuals when they are no longer at their strongest or in their best health. In Sweden the unemployment is even higher in the 60-64 age group, although it is still lower than average. The generous early retirement system in Denmark is probably the reason why the unemployment is so low in the oldest age group; one should however keep in mind that the figures for this group are unreliable.

Foreign Citizens and Unemployment

We now continue by looking at the unemployment statistics for foreign citizens. The statistics supplied by Eurostat does not contain any consistent data for comparison on all foreign citizens. There is however data available on “EU -15 foreigners”, that is foreign citizens from

countries outside the EU when the EU consisted of fifteen countries. This is a classification that suits the purposes here quite well. Immigrants from other Nordic countries or western European countries must reasonably be regarded as less culturally foreign than other immigrants.[28] By using the EU-15 foreigners category one can avoid a lot of the not so foreign foreigners from disturbing the comparison.

Table 3.

	Denmark		Sweden	
	Unemployment rate %	Relation index	Unemployment rate %	Relation index
Total	5.6	100	6.6	100
EU-15 foreigners	17.4	311	22.2	336

Source: Eurostat, 2004 average values calculated from quarterly data.

In both countries the unemployment rate is a lot higher for EU-15 foreigners. It is relatively higher in Sweden. This is obviously in accordance with the theories, but the difference in the relation index is not very big.

Age Distribution of Temporary Employment

It has been concluded in the theoretical part of this essay that strict employment protection policies should make it harder for some groups of workers to find regular employment. This can manifest itself by higher unemployment among these groups but also by higher rates of temporary employment. Table 4 shows statistics on the temporary employment rate for different age groups.

The temporary employment rate is the percentage of all employees that are employees with temporary contracts. It is important to note here, that not all those who are defined as "employed" in the Eurostat data are included in "employees". Self-employed are not included in the definition of employees, but are included in the group defined as employed. Eurostat defines employees and temporary employees in the following ways:

> "Employees are defined as persons who work for a public or private employer and who receive compensation in the form of wages, salaries, payment by results or payment in kind; non-conscript members of the armed forces are also included."
>
> "Employees with temporary contracts are those who declare themselves as having a fixed term employment contract or a job which will terminate if certain objective criteria are met, such as completion of an assignment or return of the employee who was temporarily replaced."

[28] In " Hur ser arbetsmarknaden ut för utrikes födda i Øresundsregionen?", for example, it is shown that in the in the Öresund region the labour market situation is decidedly better for foreign born from other parts of the EU compared to for foreign born from outside the EU. Örestat 1998.

Table 4.

	Denmark		Sweden	
Age	Temp. empl. rate %	Relation index	Temp. empl. rate %	Relation index
15-64	9.43	100	15.28	100
15-24	25.65	272	52.80	346
25-49	7.60	81	12.85	84
50-64	4.30	46	6.33	41

Source: Eurostat, 2004 average values calculated from quarterly data.

There is a higher general rate of temporary employment in Sweden than in Denmark. The tendency is the same in both countries in the sense that temporary employment decreases with age. The age categories are unfortunately quite wide. Still, we can see that compared to the unemployment statistics divided by age the pattern is similar in the respect that temporary employment is also more evenly distributed in Denmark. The relation index is considerably higher for the youngest age group of employees in Sweden than in Denmark. These statistics are also in accordance with our theoretical predictions.

Foreign Citizens and Temporary Employment

It was not easy to find data on the temporary employment rate for immigrants, but in "Employment in Europe 2002" there are figures on the temporary employment of non EU citizens for 2001. The EU was at this time only fifteen countries so this is actually the same category as the category "EU-15 foreigners" used above.

Table 5.

	Denmark		Sweden	
	Temp. empl. rate %	Relation	Temp. empl. rate %	Relation
Total	9.1	100	14.9	100
EU-15 foreigners	18.6	204	35.3	237

Source: Employment in Europe 2002, data for 2001, the total rate has been calculated from quarterly data from the Eurostat databank.

In both countries the rate of temporary employment is more than twice the rate for all employees. The relation index is also in this case higher in Sweden than in Denmark. Compared to the comparison of unemployment rates the difference in relation indexes between Denmark and Sweden is much clearer in this case.

Self-Employment and Age

Self-employment is an alternative way of making a living. Self-employment is probably a preferred situation for a lot of workers. Self-employment could also be a choice made more

attractive because the regular labour market presents few attractive opportunities. This means that the relation index of self-employment should be higher in Sweden for the groups that, according to the interpretation of the theories, should have a relatively tougher labour market situation in Sweden. This means that the relation index of self-employment should be higher for young people and immigrants in Sweden. One should, however, keep in mind that there are with all certainty a multitude of other factors that can affect the rate of self-employment for different groups. There could be differences in legislation, subsidies and the availability capital, to mention just a few factors that are not considered here.

Eurostat publishes age divided statistics on self-employment. The table below shows the rate of self-employment to total employment in different age categories.

Table 6.

	Denmark		Sweden	
Age	Self-empl. rate %	Relation index	Self-empl. rate %	Relation index
15-64	7.7	100	9.6	100
15-24	1.4*	17.8*	1.9	19.6
25-49	7.6	99	9.1	94.5
50-64	11.5	149.4	13.1	136.4

Source: Eurostat, 2004 average values calculated from quarterly data.
*This figure is calculated from the figures for Q4 2004, it is presented by Eurostat with the comment that it should be regarded as unreliable.

The differences between Denmark and Sweden are very small in this respect. Both in Denmark and Sweden self-employment is something that increases with age. Contrary to the case of unemployment and temporary employment self-employment actually seems to be more evenly distributed in Sweden. The slightly higher self-employment rate could be an indication of the relatively harder labour market for young workers in Sweden. The slightly lower self-employment rate for older workers in Sweden could be a result of the relatively better situation older workers enjoy in Sweden. Perhaps older Swedish workers are somewhat more reluctant to leave the regular labour market because of the relatively secure employment many in this age group enjoy. One must, however, keep in mind that the differences between Denmark and Sweden are very small here, and that the rate for the youngest age group in Denmark should be regarded as unreliable.

Foreign Citizens and Self-Employment

As mentioned before the relation index for the self-employment rate should also be higher for immigrants in Sweden. Table 7 shows figures from OECD on the rate of self-employment to total employment for all employees and for foreign citizens.

Two things should be noted here. First, the category of immigrants here includes all foreign citizens living in Sweden and Denmark, not just EU-15 foreigners. Second, this comparison is not limited to individuals of working age; it includes all individuals above the age of 15 years.

Table 7.

	Denmark		Sweden	
	Self-empl. rate %	Relation Index	Self-empl. rate %	Relation index
Total	9.3	100	11.4	100
Foreigners	8.6	92.4	12.5	109.6

Source: OECD: Employment Outlook 2001, chapter 5 – The Employment of foreigners: outlook and issues in OECD Countries. Figures are for 1999. The total rates are weighted averages calculated from figures in Employment outlook 2001.

As we can see in table 7 self-employment rates are lower than average for foreign citizens in Denmark, whereas they are higher than average for foreign citizens in Sweden. The differences are by no means large, but still the differences support the notion that the regular Swedish labour market is tougher for immigrants. The statistics support the theories in this case as well.

Putting Things Together – The Outsider Rate

While temporary employed workers are not unemployed, they cannot really be regarded as established in the labour market. They are outside regular employment. For this reason it can be interesting to put unemployment and temporary employment together into a measure of how large part of the labour force is outside regular employment. Let us call this the "outsider rate". It is reasonable to believe that a large part of those "outside" is in a situation of being "in-and-out-of-employment". The outsider rate is an indicator on how large a part of the labour force that is in this, somewhat precarious, situation. This is by no means an established measure of labour market performance; it is purely my own creation. The principle is the same as for the established measure of unemployment. It is calculated by dividing the sum of employees on temporary contracts and unemployed with the number of individuals in the labour force.

Table 8.

	Denmark		Sweden	
Age	Outsider rate %	Relation Index	Outsider rate %	Relation index
15-64	13.7	100	19.5	100
15-24	31.4	229	59.7	307
25-39	14.0	102	19.9	102
40-49	8.5	62	11.9	61
50-59	9.1	66	9.1	47
60-64	6.6	48	11.9	61

Source: Eurostat, 2004 average values calculated from quarterly data.

Not surprisingly we see the same pattern here as in the unemployment rates and the temporary employment rates. In Sweden the outsider rate decreases with age up to the 60-64 age group. In Denmark the outsider rate is more evenly distributed and is at its lowest in the 40-49 age group. In Sweden almost 20 percent of the not so young age group 25-39 seem to have, at best, a weak foothold in the labour market. The outsider rate for the youngest age group is obviously very high, but maybe this is not so problematic if it is a passing stage.

Unfortunately data to calculate this measure for EU-15 foreigners has not been available.

Concluding Discussion

From the statistics it seems as though the Swedish labour market is actually somewhat tougher relatively speaking for foreign citizens and young people. These observations support the theoretical reasoning carried out earlier. The evidence presented here is mostly circumstantial, so one cannot conclude that the theories actually explain the patterns visible in the labour market statistics. There are other possible explanations that are not investigated here.

One source of a relatively low quantity demanded for labour from certain groups indicated in the theoretical chapter is deficient wage flexibility. Wage setting structures have not been investigated in any detail here. For the purposes here it has simply been assumed that wage setting is roughly the same in both Denmark and Sweden. There could also be differences between the countries in attitudes towards different groups of workers. This could also be part of an alternative explanation to the differences. For young people differences in the educational system could be part of the explanation. Perhaps the Danish school system makes for a smoother transition from school to work.

The Unemployment Statistics on Age

Whatever the reasons are, it seems to be an indisputable fact that young workers have a better position on the Danish labour market. When looking at the differences in unemployment between different age groups it is not just the situation of the younger age groups that is interesting. It is also very interesting to see the different patterns between Denmark and Sweden. In Sweden the unemployment rate decreases with age to a higher extent. This could very well be because there are strong seniority rules in the Swedish labour legislation.

The fact that the unemployment for older workers in Sweden is low, both compared to Denmark and compared to the general Swedish rate, can be regarded as one of the merits of strict employment protection. To protect older workers from unemployment in times of structural changes was in fact, according to Calleman, the main goal of the Swedish employment protection legislation when it was created in 1974.[29] This ambition seems to have succeeded, but the question is: has the ambition to protect older workers led to the high unemployment rates and high rates of temporary employment at the other end of the age spectrum instead? If this is so, the argumentation in defence of strict employment protection today, has to rely on other foundations than the idea of protecting older workers from unemployment. That is, unless one could present convincing arguments for why unemployment of older workers is worse than unemployment of younger workers.

The Unemployment Statistics on Immigrants

The results concerning immigrants are not very convincing. The difference in the relation index for 2004 is small. When looking at a slightly longer time period (2001-2004), the relation index actually comes out slightly higher for EU-15 foreigners in Denmark. This indicates that the theoretical predictions concerning immigrants are actually incorrect. The theories do however mostly predict that entry should be harder with high labour turnover costs or high fixed costs of labour. So the time passed since entering the country should be an important determinant of the immigrant's labour market situation. Furthermore, outside the EU-15 countries there are obviously still great differences between countries. Some countries diverge more than others in culture, educational standards, economic development and so forth. So the EU-15 foreigners classification allows for a lot of variation in time of residence and country of origin. The EU-15 foreigners classification is still a better classification than

[29] Calleman 2003, p 13.

foreign citizens, given for example that Sweden has a rather large part of (not so foreign) Finnish citizens living in the country.

A general problem with statistics based on citizenship is that when comparing countries, the differences in rules and procedures for naturalisation can create misleading statistics. There are some data on the foreign *born* population. These statistics are not affected by differences in naturalisation rates, but can still have the problem that they do not give very much information about country of origin or time of residence.

Looking at immigration statistics for Denmark and Sweden from 1991 to 2002, the average size of immigration (from both EU-15 and other countries) is about the same. Denmark's population is roughly half the size of Sweden's, so relative to the population the Danish immigration has for a number of years been about double the size of Sweden's. For the years 1991 to 1998 the immigration from countries outside the EU-15 countries was roughly 50 percent higher in Denmark in absolute numbers.[30] What is even more important to note is that the Danish immigration has been much larger during the nineties compared to the pre-existing stock of immigrants. The stock of immigrants in Sweden is still much larger than in Denmark.[31] What this means is that statistics on foreign citizens or the foreign born population probably reflect people with significantly longer average time of residence in Sweden compared to Denmark. The statistics available from Eurostat suggests that this especially applies for immigrants from countries outside the EU-15 countries. With this in mind it is not surprising that the employment situation of EU-15 foreigners in Sweden is not much worse than in Denmark.

Temporary Employment and Outsider Rates

Comparing rates of temporary employment between Denmark and Sweden is in a sense comparing apples and oranges. In Sweden, where there is strict employment protection for regular employment, the step from temporary to regular employment is bigger. This goes for both employers and employees. Temporary employment is for the employees normally a relatively insecure form of employment, and for employers it is lesser commitment than regular employment.

[30] Eurostat Databank.
[31] Blume, Gustafsson, Pedersen and Verner 2003, p 6.

It can be assumed that regular employment is in general preferred to temporary employment. In light of this, one should view the temporary employed as individuals who, to a large part, are in pursuit of open ended regular employment.[32] The chances for a temporary employed individual to secure a regular employment where he or she is employed, can be expected to vary with how large the difference in commitment this would mean for the employer. If the difference is small, then there is not much reason for the employer to not to offer the employee a regular employment. That is, assuming that the employer benefits from the work the employee provides and that the employer is satisfied with the performance of that individual. If the difference in commitment is large, the employer would be more inclined to keep the employee as long as is legally possible on temporary employment contracts. Then, the employer needs stronger motivation to offer the employee a regular employment, even if the employer benefits from the work of that individual and is happy with his or her performance. This means that, assuming that regulation for temporary employments are similar, the chances for a temporary employed to obtain a regular employment for the same employer can be expected to be smaller if employment protection is strict.

The outsider rate is a measure of how large part of the labour force that is either unemployed or temporary employed. While unemployment is probably worse, temporary employment is still also a precarious situation. The measure is an indicator of how large part of the labour force is in a poor labour market situation. As seen above (table 8) the total outsider rate is higher in Sweden. In the age statistics the rate is much more evenly distributed in Denmark. This supports the theories discussed earlier.

Further, the outsider rate is an indicator that carries more meaning in the context of labour market with strict employment protection. The ideal of a labour market of this sort is arguably not just high employment, it is high *protected* employment. The outsider rate measures for how large a part of the labour force this strategy fails. When comparing labour market statistics for different groups one can get a picture of for whom the strict employment protection strategy fails. In the statistics above, we can see that the strategy fails in particular for young people and EU-15 foreigners.

[32] Holmlund and Storrie 2002, pp 22-24.

Self-Employment

One should be cautious of over interpreting the statistics on self-employment. The differences are small between Denmark and Sweden when it comes to self-employment, and it is a strong assumption that necessity is an important factor for people to choose to be self-employed. Still, for whatever it is worth, the results do support the theories.

Summing up

From the theoretical reasoning and the empirical examination of the case of Denmark and Sweden, I find that it is very likely that strict employment protection while protecting some workers positions hampers the opportunities of others. Mechanisms that lead to this result are described in the theoretical chapters of the essay. The mechanisms explored all work in the same directions for the groups in focus. Through insider market power due to high labour turnover costs, the opportunities for entrants are decreased. The higher fixed costs of labour with strict employment protection, penalises factors of uncertainty in hiring situations. To sum it up, it is very likely that these mechanisms decrease the labour market opportunities of young people and immigrants. If this is so, this should be regarded as a serious problem with strict employment protection.

The discussion here is by necessity limited to a specific aspect of labour market regimes, and there could very well be upsides to employment protection that are outside the scope of the work presented here. Fixed costs of labour turn hiring decisions into investment decisions. With higher fixed costs of labour there is more motivation for the employer to protect the investment. This could have positive effects in that the employer might take more care of the employees and their long term productivity. This could mean that the employers would invest more in training for employees and be motivated to strive harder to protect the health of employees. From this perspective, strict employment protection could promote higher efficiency in production. Under strict employment protection, workers might be better equipped to stand up for a good working environment and other aspects of fair working conditions.[33] This could certainly be regarded as a positive side of strict employment protection. Further, one could possibly argue that employment protection creates stability in the labour market and prevents too much circulation.

[33] Wallette has, for example, shown that employer invests far less in on-the-job training for temporary employed than for regularly employed. Wallette 2004, pp 137-168.

On the other hand, there might be other negative aspects with strict employment protection than those that have been considered in this essay. The increased market power of insiders might not just affect the distribution of good employment opportunities. The main point of insider-outsider theory remains, that insider market power increases the level of unemployment. There should also be some concern for how strict employment protection affects the flexibility of production. To stay competitive firms need to develop their production methods. With changing production methods the work involved may change as well, and the existing personnel might not have the right skills anymore. If the employer is, more or less, stuck with a particular set of workers, this might limit the options when changing production methods. This might limit the development of productivity. Then of course there is the issue of numerical flexibility with regard to changing market conditions. Low numerical flexibility might make firms hesitant to hire new workers, because this might lead to high costs if demand falls.

While it might be good that strict employment protection empowers employees to protect their rights, there is quite obviously another side of this coin. Strict employment protection also means that employees can obstruct changes or shirk at work, without jeopardising their employment.

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